Section 2: Regional Strategies for Achieving National Goals and Objectives

Goal 1: Clean Air and Global Climate Change

Protect and improve the air so it is healthy to breathe and risks to human health are reduced. Reduce greenhouse gas intensity by enhancing partnerships with businesses and other sectors.

Objective 1.1: Healthier Outdoor Air

Sub-objective 1.1.1: More People Breathing Cleaner Air

A) Current Conditions:

For the vast majority of areas, Region 8 has reached attainment of all air quality standards by working closely with state, tribal and local partners to successfully address particulate matter (PM), carbon monoxide (CO) and ozone issues. Recent calculations indicate that approximately 60 percent of the Region's population live in areas attaining all of the air quality standards, 10 percent live in a PM10 (particulate matter less than 10 micrometers in diameter) non-attainment area and 30 percent live in an area not attaining the ozone standard.

PM10: The Region had 21 PM10 non-attainment areas (18 State and three Tribal), 20 of which were either re-designated to attainment or were attaining the standard until 2001 when Salt Lake City violated the national ambient air quality standards (NAAQS) primarily due to fugitive emissions from tailings piles from mineral extraction activities. There have been PM10 NAAQS exceedances and the PM10 increment has been consumed since triggering of the baseline date in the Powder River Basin (WY/MT) in proximity to energy development (i.e., coal mining and coal bed methane) and PM10 NAAQS have been exceeded in southwest Wyoming (Carbon and Sweetwater Counties).

Ozone/PM2.5: Salt Lake City currently meets new standards for 8-hour ozone and PM2.5 (particulate matter less than 2.5 micrometers diameter), but average 8-hour ozone levels are close to the standard. Four sites in Salt Lake County and one in Weber County have three-year design values between 80 - 82 parts per billion (ppb). The 2000 ozone season in Utah was particularly severe. Some areas would have had 8-hour NAAQS violations, but their high ozone values were determined to have been influenced by wildfire smoke. In summer of 2003, Denver violated the 8-hour ozone NAAQS (80 ppb) after having been in attainment. For the years 2001 - 2003 (preliminary data for 2003), the Denver area had two suburban counties with ozone design values between 85 - 87 ppb. Denver is an Ozone Early Action Compact Area, and is working to develop control measures to reduce emissions to bring the area back into attainment. In addition, Rocky Mountain National Park, northwest of the Denver area, is experiencing increased ozone levels most likely from sources along the Colorado Front Range. Libby, Montana, is currently the only area within the Region violating the PM2.5 NAAQS. EPA Region 8 will work with the Montana

Department of Environmental Quality to address air quality in this area.

PSD for Nitrogen Oxides (NO_x), Sulfur Dioxide (SO_2), Regional Haze: Region 8 is an energy exporting Region. We export vast quantities of coal and natural gas and provide much of the electricity for neighboring states. In addition, our Region is the only part of the country that is increasing natural gas production. The growing demand for fossil fuel resources and energy production creates challenges for the Prevention of Significant Deterioration (PSD) program. Recently, the focus has been on whether increment violations have occurred in North Dakota and Montana. In Wyoming, there has been concern about increment consumption where recent Bureau of Land Management air quality modeling analysis indicates future consumption of the allowable PM10 increment (Campbell County) and the NO_x increment (Northern Cheyenne Class I area) related to coal bed methane development. At the same time, Region 8 is working with the Western Regional Air Partnership to secure emission reductions necessary to meet regional haze goals.

B) Regional Trends/Challenges:

The Region's most significant air quality challenges will arise from increased energy exploration and development, power generation, population growth and development and persistent drought.

PM10: Rapid coal bed methane development in the Region, particularly in the Montana/Wyoming Powder River Basin could result in 7,000 diesel generator compressor stations and over 9,000 miles of new primary dirt roads. This area also has several of the largest open-pit coal mines in the world. The Region and our state and tribal partners will need to adopt mitigation strategies to reduce road dust and reduce emissions. EPA Region 8 actively participates in state and interstate workgroups formed by the Bureau of Land Management to coordinate activities in the Basin. In addition, EPA has provided a grant to the Wyoming Department of Environmental Quality to research the effectiveness of road dust mitigation strategies and the economic feasibility for reducing emissions from coal bed methane development, coal mining and rural roads. Persistent drought in the Region complicates dust control strategies and has increased the frequency of forest fires. Wind erosion from fields or rangeland and occasional agricultural burning sometimes contribute to PM10 pollution. Forest fires increase levels of PM10 and PM2.5 and affect ozone which contributes to visibility issues and increased incidence of asthma, especially where development increasingly borders national forests. Salt Lake City's PM10 challenges include controlling emissions from mobile and stationary sources, and finding a new treatment strategy for fugitive emissions from construction, agriculture and vacant/abandoned disturbed land.

Ozone and PM2.5: Through an Early Action Compact, the Denver area will be working to address ozone controls to bring the area back into attainment. While the rest of the Region currently meets standards for the new 8-hour ozone and PM2.5 standards (except Libby, Montana), projected population growth and development increase the risk of standards violations, particularly in the Salt Lake City and Denver metropolitan areas.

PSD for NO_x, SO_2, Regional Haze: Because we have few significant areas of non-attainment,

Region 8's primary focus is preventing significant deterioration, particularly in the Region's 39 areas where air quality is most protected (known as Class I designation areas) which include three Indian Reservations (Northern Cheyenne, Fort Peck and Flathead). Adding new sources of NO_x and SO_2 could trigger future PSD violations and contribute to further impairment of visibility and regional haze. Even though Wyoming has protective emission standards for diesel generators and gas-fired compressors, it is estimated that compressor stations will need to service 70,000 coal bed methane wells in the Powder River Basin, representing a growing source of both NO_x and PM10. The Region is also a net exporter of power, and all of Region 8's states have planned or are contemplating new coal-fired power plants to meet growing power requirements in the Midwest and California. North Dakota exports more than 70 percent of the power it generates and plans to build new power plants. The Region has been in discussions with the North Dakota to determine whether its emissions could create SO_2 increment violations in Class I areas and if the modeling protocol is sufficient to accurately predict violations. Many tribes are developing renewable and nonrenewable energy resources (e.g., refineries). The Northern Cheyenne Reservation, which is a designated Class I area, has informed the Region of concerns with potential coal bed methane emissions.

Tribal Authority Rule: Seven of Region 8's 27 tribes have been authorized for treatment as a state under the Clean Air Act (CAA), and several are developing tribal implementation plans and operating permit programs.

C) Regional Strategies/Approaches/Tools:

The Region's approach to maintaining air quality includes pursuing innovative voluntary measures; monitoring growth and development trends; conducting ambient air monitoring; reviewing state permits; and working proactively with our states and tribes to evaluate proposed development and model impacts to assure PSD violations or visibility impairment don't occur.

PM10: Utah continues to develop a PM10 Maintenance Plan for Salt Lake City/Davis County and Utah County as well as the Natural Events Action Plan for exceedances of NAAQS caused by natural events. In addition, the Region encourages states to use the Limited Maintenance Plan for PM10 in moderate non-attainment areas.

Ozone & PM2.5: For ozone, the Region will continue to work with the Colorado Department of Public Health and Environment in addressing violations through the Early Action Compact process. For PM2.5, Region 8 will continue to monitor ambient air quality trends – with a focus on Salt Lake City and Denver – to identify trends and impacts of growth and development and the potential benefits of newer, cleaner vehicles.

PSD for NO_x, SO_2, Regional Haze: The proposed Clear Skies legislation will have the greatest applicability in North Dakota. There, the cap and trade program may provide incentives for high-sulfur, lignite coal-fired power plants to implement capital improvements. In the interim, the Region will continue to address PSD increment concerns, working with the North Dakota Department of Health to resolve air modeling projection issues and pursue improvements to

existing facilities. In Montana, the Region is sponsoring state/tribal dispute resolution to assure current and projected coal bed methane development is incorporated into the state's increment projections to protect future development opportunities. The Region will continue to work with our states and tribes to ensure that sources are properly permitted. The Region also actively participates in the Western Regional Air Partnership committees and work groups addressing cross-border haze issues and planning regional haze reductions.

Voluntary Measures: The Region will continue to emphasize voluntary programs to improve local air quality, including: ENERGY STAR®, Ag Star, Commuter Choice, the Diesel Retrofit program, innovative voluntary measures to offset development and the use of supplemental environmental project (SEP) penalties to fund environmental projects. In addition, the participation of Salt Lake City and Denver in the AIRNow program will continue to provide valuable information to the public to make decisions about personal activities which could reduce air quality effects on days when the air quality is of concern.

D) Primary Measures of Progress: (EPA will discuss issues revealed through tracking with state air directors.)

- XX percent of the population live in areas that attain air quality standards
- Progress in re-designating non-attainment areas to attainment
- Title V permits: universe permitted
- NSR (New Source Review) permits
- For tribes without air monitoring programs, EPA will alert them about NAAQS exceedances from monitors within the vicinity. All Region 8 tribes can access the Air Quality System (AQS) which provides data on ambient concentrations of criteria pollutants via a request to EPA or by obtaining AQS password approval.

Sub-objective 1.1.2: Reduced Risk from Toxic Air Pollutants

A) Current Conditions:

Region 8 does not have the population density or concentration of heavy industry that contribute to air toxics issues present in other parts of the country. While not conclusive, monitoring results to date have identified no significant issues.

Monitoring: The Region has two air toxics trend monitoring sites (Grand Junction, Colorado and Bountiful, Utah) which also use the Urban Air Toxics Monitoring Program (UATMP). South Dakota also conducts monitoring under the UATMP. In addition, the Spirit Lake Sioux are now conducting air toxic monitoring activities to better understand emissions and potential impacts to the local community from a tribally-owned manufacturing facility.

Community Assessment: Region 8's involvement in community assessment has been very limited and has focused upon single known sources of toxics including a steel mill in Pueblo, Colorado and oil and gas wells in Parachute, Colorado.

B) Regional Trends/Challenges:

Regional challenges include projected population growth in Denver and Salt Lake City and the related increase in toxic sources (mobile, area and major sources). Energy development and power generation are growth industries expected to increase air toxics emissions.

C) Regional Strategies/Approaches/Tools:

Region 8 efforts to date have focused on Maximum Achievable Control Technology (MACT) delegation, enforcement/oversight, incorporation of toxics requirements in air permits, air toxics monitoring, community implications of toxics emissions and outreach on reducing toxics emissions from diesel engines. Mobile sources, a consistent source of air toxics for the Region, are being addressed by national programs to reduce vehicle emissions. Limited research is being conducted nationwide to characterize emissions from various animal feeding operations and develop suitable control strategies. Air toxics is a lower priority for our states and tribes in part due to current monitoring results and a limited staff. Part of the Region's strategy is to integrate air toxics into other existing regional and state programs, to take advantage of program synergies and raise awareness. The Region will continue partnering with states and tribes to evaluate risks, particularly where there may be more localized impacts, to develop voluntary options for emissions and risk reduction and to communicate with affected industries and communities. The Region's Environmental Justice program has initiated efforts for the Northeast Denver neighborhood to better characterize and reduce exposures primarily from mobile sources.

D) Primary Measures of Progress:

- % high risk areas with monitors
- % population living in areas with air toxics monitors
- Reductions [tons] in air toxics from regional/partner activities
- Increased ambient air monitoring in Indian Country as appropriate.

Objective 1.2: Healthier Indoor Air

A) Current Conditions:

Radon: Radon testing in Region 8 has shown that we are above national norms in homes and buildings, with some of the highest levels of radon in North America.

Asthma Prevalence Rates: The following prevalence rates come from the Centers for Disease Control and Prevention (CDC) and are based on the 2000 Behavioral Risk Factor Surveillance System (a telephone survey). These are adult, self-reported rates that do not include pediatric rates. The overall Region 8 rate is 7.4 percent, with over 452,928 cases of asthma.

State	Prevalence (%)	Prevalence (#)
Colorado	6.6	199,982
Montana	8.3	53,246
North Dakota	7.4	34,316
South Dakota	5.6	29,384
Utah	7.6	106,714
Wyoming	8.6	29,286

B) Regional Trends/Challenges:

The challenge is to educate states, tribes, partners and the general public and to encourage active participation, since "indoor air" is a voluntary program. The high levels of radon in the Rocky Mountain region are a public health concern that will require significant, ongoing public outreach to test and mitigate radon in homes.

C) Regional Strategies/Approaches/Tools:

The Region 8 strategy focuses on educating minority and sensitive populations (e.g., children, seniors, tribes). Programs such as Tools for Schools and the State Indoor Radon Grant (SIRG) program work towards accomplishing indoor air improvement. We also work with the Indian Health Services, and other partners and associations, to educate others on the relationship of indoor air environmental pollution to public health.

D) Primary Measures of Progress:

Radon metrics will continue to be reported by states and tribes to the Radon Grant Project Officer based upon the number of homes tested, mitigated and constructed with radon-resistant construction, annually. Region 8 will award Radon Grants (SIRG) to tribal programs in order to better quantify radon concentrations in homes, ambient air, schools and water. These data will better substantiate health effects, improve indoor environments (IE) both in homes and schools and correlate high radon areas in the Region 8 tribal lands. Region 8 will provide appropriate tools and assist tribes in assessing indoor air pollution concerns. As appropriate, Region 8 will work with other federal agencies to provide guidance and assistance on how to reduce the exposure levels of contaminants in all tribal communities.

Asthma metrics are dependent upon competitive IE grants funding and the objectives of each grant. Grant results will be reported annually or upon completion of the grant.

Indoor environments improved air quality within schools is monitored using Tools for Schools (TfS) metrics as reported annually to EPA's Office of Radiation and Indoor Air (ORIA). EPA's voluntary IE programs cannot measure IE metrics within workplaces or homes unless the workplace is another federal agency or EPA is invited into private residences.

Objective 1.4: Radiation

Sub-objective 1.4.1: Enhance Radiation Protection
Sub-objective 1.4.2: Maintain Emergency Response Readiness

A) Current Conditions:

Region 8 has numerous mill tailings and Superfund sites resulting from historic uranium mining and milling activities. EPA oversees National Emission Standards for Hazardous Air Pollutants (NESHAP) for items that include mill tailings, the Yucca Mountain High Level Waste Repository and related Superfund site cleanups located in Region 8. Radiation personnel provide risk assessments, fate-and-transport computer modeling for various Superfund sites and support for the radiation dosimetry program and emergency response activities.

B) Regional Trends/Challenges:

Primary challenges involve maintaining personnel and equipment readiness in preparation for: emergency response to potential terrorist threats; technical assistance certifying drinking water laboratories; and, inspections at RCRA (Resource Conservation and Recovery Act) and disposal facilities, Superfund sites and uranium mines.

C) Regional Strategies/Approaches/Tools:

Region 8 has a cross-program strategy to coordinate radiation program activities with RCRA, Superfund, Emergency Response and drinking water programs to respond to terrorist events and prevent releases from storage and waste sites. Regional strategies include participating in emergency response exercises, increasing radiation training and improving federal, state, tribal, local and private sector communications.

D) Primary Measures of Progress:

- Number of exercises engaged
- Volume of "orphan sources" properly disposed.

Objective 1.5 : Reduce Greenhouse Gas Intensity

A) Current Conditions:

Region 8 is home to an estimated 500 companies and public entities participating in ENERGY STAR® programs, and Colorado is second only to California for buildings and homes that qualify for the ENERGY STAR designation. The Region currently has Commuter Choice programs in its two largest metropolitan areas, Salt Lake City and Denver, as well as a number of smaller mountain communities.

B) Regional Trends/Challenges:

The Region's challenge is finding ways to promote voluntary programs like ENERGY STAR and Commuter Choice in a part of the country where communities are geographically dispersed and many are experiencing economic strains. The strategies and tools that support this objective emphasize voluntary programs and partnerships targeted at areas where the Region's resources

can have the most impact. For ENERGY STAR, these areas are largely in the major metropolitan centers or are sector-based (e.g., schools or hospitals).

C) Regional Strategies/Approaches/Tools:
Commuter Choice: This relatively new program is currently promoted by EPA Headquarters directly to major employers in target cities. Region 8 views the program as one component of a larger transportation strategy which encourages communities to engage in long-term planning of growth, land use, major highway improvements and transit development as well as maintaining successful public transit ridership incentives (e.g., the Denver area Eco Pass program) to reduce the environmental and human health impacts of transportation.

ENERGY STAR®: The ENERGY STAR program for buildings provides the Region the greatest potential for reducing greenhouse gas emissions. The Region's strategy is to create alliances and partnerships with public/private associations, organizations and others that represent each sector within the building program to cultivate and foster market transformation.

Wind Energy: EPA will develop a generic guidance for key environmental activities, issues and requirements related to EPA's regulatory activities for wind projects. Because wind energy is one of the most cost-competitive renewable energy options, EPA will focus on guidelines for that resource first, rather than others such as geothermal, solar and biomass which each have their own associated environmental issues. The purpose of this document is to identify the environmental issues that must be considered in proposed wind energy projects for which EPA is involved, specifically for projects proposed on tribal and federal land or which use federal funding. The document will help ensure that wind energy projects are designed to minimize or avoid environmental impacts, thus streamlining the environmental review process for such projects. It may be useful to states, local governments and private parties for wind energy development. As an example, the Intertribal Council on Utility Policy seeks EPA participation to streamline the siting and construction of wind energy systems in the Region. With the completion of the guidance document, the Council and appropriate natural resource agencies (federal, state, local, tribal) will have a primer on EPA's environmental issues, concerns and approaches to wind energy production.

D) Primary Measures of Progress:
- Data on bench marking and re-bench marking of building with ENERGY STAR and ENERGY STAR Metrics (i.e., greenhouse gas emissions voided and dollars saved)
- Number of employers providing Commuter Choice or other commuter based programs to employees.